

REMARKS

In an Examiner's Office Action issued March 10, 2003, the Examiner rejected each of claims 1 – 10 over prior art. Accordingly, Applicants respectfully submit the present Request for Continued Examination in an effort to both secure a personal interview in connection with the present application, and to further provide arguments distinguishing each of claims 1 – 10 of the present application from the prior art references applied by the Examiner.

Request for Personal Interview

Initially, Applicants respectfully request the Examiner to grant a personal interview in connection with the present application, prior to issuance of a first Office Action. Applicants have submitted the present Request for Continued Examination in response to the Examiner's Final Rejection in an effort to secure this personal interview. Accordingly, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below in an effort to arrange for a mutually convenient time and date on which to conduct the personal interview. Accordingly, Applicants' representative hereby awaits contact from the Examiner.

Prior Art Rejection

The Examiner has rejected claims 1 – 3, 5, and 7 – 10 under 35 U.S.C. § 103 as being unpatentable over Egee et al. in view of Geiler et al. This rejection is respectfully traversed.

Lack of Motivation to Combine References

Initially, Applicants respectfully submit that the Examiner is not provided proper motivation for establishing a *prima facie* case of obviousness under 35 U.S.C. § 103. To establish obviousness based on a combination of elements disclosed in the prior art, there must be some motivation, suggestion, or teaching of the desirability of making the specific

combination that was made by the Applicant. The motivation, suggestion, or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or in some cases, the nature of the problem to be solved. See *In re Dembiczak*, 50 USPQ 2d 1614 (Fed. Cir. 1999). In order to establish a *prima facie* case of obviousness under 35 U.S.C. § 103, the Examiner must provide particular findings as to why the two pieces of prior art are combinable. Broad conclusory statements standing alone are not “evidence.” See *Dembiczak*, USPQ at 1617.

In the Examiner’s prior art rejection, the Examiner lists some portions of the Egee et al. reference which allegedly meets some of the limitations of the claim; lists some portions of the Geiler et al. reference, which allegedly meets some portion of the claim; and then includes the statement as follows: “absent some degree of criticality, the choice of either method would have been a matter of routine design choice within the skill of a person of ordinary skill in the art depending on the needs of the particular application in view of the known use of such methods for the functionally purpose of periodically heating a layer structure.” This statement does not provide any indication as to why one of ordinary skill in the art would be motivated or led to combine the teachings of the prior art, and instead, merely indicates that the Examiner is utilizing Applicants’ invention, in hindsight, as a reason to combine the teachings of the prior art. Such a use of hindsight is impermissible. There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination, wherein that knowledge cannot come from Applicant’s invention itself. *In re Oetiker*, 24 USPQ 2d 1443, 1446 (Fed. Cir. 1992).

The statements made by the Examiner are not any evidence of motivation, suggestion, or teaching for one of ordinary skill in the art to combine the teachings of Egee et al. and Geiler et al. Such evidence is required in order to make a proper reference combination. Relying on common knowledge or common sense of a person of ordinary skill in the art without any specific hint or suggestion of this in a particular reference is not a proper standard for reaching the conclusion of obviousness. This was clarified by the Federal Circuit in the recent case of *In re Sang Lee* 61 USPQ 2d 1430 (Fed. Cir. 2002).

Somewhat similarly, the Examiner relies on obvious design choice as a reason for combining teachings of various references. This is again not the proper standard for obviousness. If the Examiner is relying on personal knowledge to support a finding of what is known in the art, the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. See 37 C.F.R. § 1.104(d)(2) and MPEP § 2144.03(c). Accordingly, Applicants respectfully challenge the Examiner's use of design choice and respectfully require the Examiner to withdraw the rejection or provide an affidavit or declaration as set forth above if the rejection is to be maintained.

Even If Combined, the References Would Still Fail to Teach or Suggest the Various Limitations as Claimed

As set forth in claim 1, the invention is directed to a thermal wave measuring method. The method includes the steps of simultaneously driving a modulatable heat source with at least two predetermined discrete and differently modulated frequencies. The method further includes receiving infrared radiation...that is "correspondingly modulated" in intensity; and evaluated...by "simultaneously" interpreting corresponding drive frequencies. As such, the term simultaneous, based upon its plain and ordinary meaning, refers to evaluation at the same time of

at least two frequencies of this type, which are modulated on the input side. The term “drive frequencies” refers to and should be understood as respective modulation frequencies; and the term “corresponding” clearly refers to the same two or more frequencies that are modulated on the input side, also being adjusted on the receiving or output side for evaluation. As such, the claims differ from the prior art references, taken either singularly or in combination, as follows.

The cited reference to Egee et al. describes a method involving heating up of a layer structure, wherein a single frequency is initially used on the input side for modulation. This is acknowledged by the Examiner, wherein the Examiner states that Egee et al. does not specifically disclose simultaneous driving with at least two predetermined discrete and differently modulated frequencies. Further, Egee et al. therefore also fails to teach or suggest “evaluating”...by simultaneously interpreting corresponding drive frequencies as set forth in claim 1.

Applicants respectfully submit that Egee et al. fails to teach or suggest any predetermined discrete frequency (let alone at least two) as column 2, lines 12 – 18 and lines 25 – 29 refer only to a higher and a lower frequency, without providing any discrete or exact frequency information. On the receiving side, while Egee et al. can utilize infrared detection, there is no discussion of any type of evaluation relating to any discrete and differently modulated frequencies, on any precise frequencies which are identical to radiated-in modulation frequencies. Rather, in column 2, from lines 12 – 34, Egee et al. discloses radiating a reference sample and deals with radiating in and heating up on the input side, as well as detection of a thermal wave on the output side. The determination of various parameters described in line 35, of column 2, etc. is made with the aid of value tables and frequency ratios, which differs

considerably from an evaluation method used by simultaneously interpreting corresponding drive frequencies as set forth in claim 1 of the present application for example. Thus, as set forth in claim 1, simultaneous driving of a modulatable aid source occurs with at least two predetermined discrete and differently modulated frequencies, and evaluation takes place at those discrete and differently modulated frequencies.

Further, Applicants respectfully submit that Geiler et al., even assuming *arguendo* that it could be combined with Egee et al., which Applicants do not admit for the reasons set forth above, would also fail to make up for at least the previously mentioned deficiencies of Egee et al. Geiler et al. does disclose some type of thermal wave measuring method which functions to detect modulated transmission or reflection, but received mixed frequencies are evaluated such that, on a receiving side, differentiation is no longer made between individual different frequencies. See column 3, lines 3 – 7 and column 5, lines 2 – 11. There is no teaching or suggestion of the two modulation frequencies on the input side being simultaneously used on the output side for evaluating a changed signal. Accordingly, when properly construed, Applicants respectfully submit that claim 1 of the present application clearly distinguishes over the alleged teachings of Egee et al. and Geiler et al. Therefore, even assuming *arguendo* that the references could be combined, Applicants respectfully submit that claim 1 of the present application, and indeed all of the claims of the present application, distinguish over the alleged combination of Egee et al. and Geiler et al.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of claims 1 – 10 in connection with the present application is earnestly solicited.

In the event this Response does not place the present application in condition for allowance, the Examiner is respectfully requested to contact the undersigned at the number listed below to schedule a personal interview.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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